

AMENDMENTS TO THE SPECIFICATION

Page 1, line 4 (and after the title) please insert the following heading:

BACKGROUND OF THE INVENTION

Page 1, please delete line 5 and substitute therefor the following:

TECHNICAL FIELD OF THE INVENTION

Page 1, please delete line 18 and substitute therefor the following:

BACKGROUND DESCRIPTION OF THE RELATED ART

Page 1, please delete the paragraph [0002] and substitute therefor the following:

[0002]

In order to find positions on brain surface being objects of measurement/stimulation in a transcranial brain function measuring/stimulating method, it is required to obtain a structural image of the brain in each case by using a brain imaging procedure such as an application of a nuclear magnetic resonance apparatus (MRI). However, such a brain imaging procedure is complicated, and ~~particular~~ specific equipment is required. Thus, a method for finding ~~more easily~~ positional correspondences more easily between a head surface and its brain surface is desired.

Page 2, please delete the paragraph [0004] and substitute therefor the following:

[0004]

The sphere fitting method is suitable for brain wave study. However, since non-spherical head surface and brain surface are applied to spheres in the sphere fitting method, there is a problem of an appearance of a spatial distortion. In brain wave studies, since a presumption of signal sources of brain waves is conducted with a low spatial resolution in a three-dimensional space, there is not a particular problem from a

practical point of view, even if there is any deviance in correspondences between the brain surface and the head surface. In other transcranial brain function measuring/stimulating ~~method~~ methods, however, a projective method having a higher spatial resolution is desired.

Page 3, please delete line 1 and substitute therefor the following:

DISCLOSURE SUMMARY OF THE INVENTION

Page 3, please delete the paragraph [0007] and substitute therefor the following:

[0007]

The present invention for achieving the first object is a method and a software program therefor for transforming head surface coordinates to brain surface coordinates, characterized by projecting arbitrary positions on a head surface in a three-dimensional head image onto positions on brain surface underlying the positions on head surface, and determining three-dimensional coordinate positions of the projected points.

Since there is an individual difference in structures of a brain and its head surface, it is desired that data integration is possible among a plurality of subjects in order to integrate data obtained by a transcranial brain function measuring/stimulating method among different subjects in ~~even~~ even where points on the head surface have been allowed to correspond to points on the brain surface in accordance with the method of the present invention.

Page 3, please delete the paragraph [0008] and substitute therefor the following:

[0008]

For this reason, it is preferred that brain surface coordinates determined with respect to a plurality of subjects are normalized to a standard brain in order to express positions on the brain surface in a ~~standardable~~ standardized format.

Although it is preferred to apply MINI (Montreal Neurological Institute) ~~coordinate~~ coordinates or Talairach ~~coordinate~~ coordinates used generally in this field as such a standard brain as described above, the other coordinate systems may also be applied.

Page 4, please delete the paragraph [0009] and substitute therefor the following:

[0009]

In studying methods for projecting arbitrary positions on head surface onto positions on brain surface underlying the head surface from a viewpoint of various angles, such novel finding that it is possible to make correctly the arbitrary positions on a head surface ~~correspondent~~ corresponding to positions on the brain surface underlying the head surface in accordance with a minimum distance search method, a perpendicular projection method, or a head surface/reference dotted line segment connecting method, and such procedure can be executed by a corresponding software program has been obtained. In this connection, the optimum method may be applied in response to a use application required among these methods.

Page 4, please delete the paragraph [0010] and substitute therefor the following:

[0010]

Further during studying methods for projecting arbitrary positions on head surface onto the positions on brain surface underlying the head surface from a viewpoint of various angles, such novel finding that it is possible to express the arbitrary positions on a head surface as a relative positional relationship with respect to standard points on the head surface, and such procedure can be executed by a corresponding software program has been obtained. In this connection, the method may be used alone and it can be expressed also on arbitrary points on the head surface, or it is also possible to express as positions projected on the brain surface by combining the method with a minimum distance search method, a perpendicular projection method, or a head surface/brain interior reference dotted line segment connecting method.

Page 4, please delete the paragraph [0011] and substitute therefor the following:

[0011]

A preferred aspect of the present invention relates to a software program based on a method wherein images of a plurality of markers set up at positions on the head surface and brain surface images are simultaneously taken in order to project the positions on the head surface onto the positions on the brain surface underlying the head surface, and the positions on the brain surface underlying the positions on the head surface at which the respective markers are positioned are determined by the minimum distance search method.

Page 14, please delete line 18 and substitute therefor the following:

~~BEST MODE FOR CARRYING OUT THE INVENTION~~ DETAILED
DESCRIPTION OF AN EXEMPLARY EMBODIMENT

Page 16, please delete the paragraph [0040] and substitute therefor the following:

[0040]

In the multi-channel light measuring system of the present example, data collection in each set of the light delivery points 4 and the light reception points 6 can be executed without any accompanying ~~[[any]]~~ cross talk, when operations of the light sources 14 and the detectors 16 are changed over sequentially in ~~[[an]]~~ every set of the light delivery point 4 and the light reception point 6.